	Application No.	**Applicant(s)**
Notice of Allowability	09/654,660	CARTER ET AL.
	Examiner	**Art Unit**	
	Arrienne M. Lezak	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *22 June 2006*.

2. ☒ The allowed claim(s) is/are *1-4,7-10,13-15,21-26,28,30 and 32*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 02/17/06

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 09/12/06 .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

JEFFREY PWU
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

An Examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Ariel S. Rogson, Attorney for Applicant on Monday, September 12, 2006.

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IN THE CLAIMS

1.   (Currently Amended) A computer-implemented method for enforcing policy over a computer network, the method comprising:

selecting a dictionary, the dictionary including a plurality of concepts organized as a directed set, exactly one concept identified as a maximal element, and for each concept in the directed set, at least one chain connecting the maximal element to the concept;

selecting a set of chains to form a basis spanning a topological vector space;

selecting at least one concept in the dictionary;

creating a state vector in the topological vector space for each of the selected concepts, wherein each state vector includes at least one measure of how concretely the concept is represented in each chain in the basis;

assembling into a template a first subset of the state vectors including at least first and second vectors in the topological vector space into a template, the topological vector space including at least one state vector not in the template;

assigning a policy to the computer network;

monitoring a portion of a content stream on the computer network to construct an impact summary, the impact summary including a second subset of the state vectors including at least third and fourth vectors in the topological vector space;

extrapolating how close the entire content stream is to the template using the impact summary and the template; and

enforcing the policy when the impact summary is within a threshold distance of the template.

2.   (Original)   A method according to claim 1, wherein assigning a policy includes assigning a policy to limit bandwidth on the computer network for content in the content stream within the threshold distance of the template.

3.   (Original)   A method according to claim 1, wherein assigning a policy includes assigning a policy to limit access to a document on the computer network within the threshold distance of the template.

4.   (Currently Amended) A method according to claim 1, wherein monitoring a portion of a content stream includes monitoring metadata of the content stream.

5.   (Canceled)

6.   (Canceled)

7.   (Currently Amended) A computer-readable medium containing a program operable on a computer to enforce policy over a computer network, the program comprising:

selection software to select a dictionary, the dictionary including a plurality of concepts organized as a directed set, exactly one concept identified as a maximal element, and for each concept in the directed set, at least one chain connecting the maximal element to the concept;

selection software to select a set of chains to form a basis spanning a topological vector space;

selection software to select at least one concept in the dictionary;

creation software to create a state vector in the topological vector space for each of the selected concepts, wherein each state vector includes as its components measures of how concretely the concept is represented in each chain in the basis;

definition software to define a template, the template including a first subset of state vectors including at least first and second vectors in the topological vector space, the topological vector space including at least one state vector not in the template;

assignment software to assign a policy to the computer network;

monitoring software to monitor a portion of a content stream on the computer network to construct an impact summary including a second subset of the state vectors including at least third and fourth vectors in the topological vector space;

extrapolation software to extrapolate how close the entire content stream is to the template from the portion of the content stream using the impact summary and the template; and

enforcement software to enforce the policy when the impact summary is within a threshold distance of the template.

8.   (Original)   A program according to claim 7, wherein the assignment software includes assignment software to assign a policy to limit bandwidth on the computer network for content in the content stream within the threshold distance of the template.

9.   (Original)   A program according to claim 7, wherein the assignment software includes assignment software to assign a policy to limit access to a document on the computer network within the threshold distance of the template.

10.   (Original)   A program according to claim 7, wherein the monitoring software includes monitoring software to monitor metadata of the content stream.

11.   (Canceled)

12.   (Canceled)

13.   (Currently Amended) An apparatus for enforcing policy over a computer network, the apparatus comprising:

a computer;

a directed set stored in the computer including a plurality of concepts, exactly one concept identified as a maximal element, and for each concept in the directed set, at least one chain extending from the maximal element to the concept;

a basis spanning a topological vector space including a subset of the plurality of chains;

for at least one concept in the directed set, a state vector in the topological vector space, wherein each state vector includes at least one measure of how concretely the concept is represented in each chain in the basis;

a template stored in the computer, the template including a first subset of the state vectors including at least first and second vectors in the topological vector space, the topological vector space including at least one state vector not in the template;

a policy associated with the template;

a monitor installed in the computer adapted to monitor a portion of a content stream in the computer network to construct an impact summary, the impact summary including a second subset of the state vectors including third and fourth vectors in the topological vector space;

a means for extrapolating how close the entire content stream is to the template using the impact summary and the template; and

a policy enforcer adapted to enforce the policy when the monitor determines the impact summary to be within a threshold distance of the template.

14.   (Original)   An apparatus according to claim 13, wherein the monitor is adapted to monitor metadata about the content stream.

15.   (Currently Amended) An apparatus according to claim 14, wherein the metadata about the portion of the content stream includes a percentage of the network dedicated to the portion of the content stream.

16-20. (Canceled)

21.   (Previously Presented)   A method according to claim 1, wherein enforcing the policy includes:

measuring a distance between the impact summary and the template; and

enforcing the policy if the distance is less than the threshold distance.

22.   (Previously Presented)   A method according to claim 21, wherein measuring a distance includes using a Hausdorff distance function to measure the distance between the impact summary and the template.

23.   (Previously Presented)   A program according to claim 7, wherein the enforcement software includes:

measurement software to measure a distance between the impact summary and the template; and

enforcement software to enforce the policy if the distance is less than the threshold distance.

24.   (Previously Presented)   A program according to claim 23, wherein the measurement software includes measurement software to use a Hausdorff distance function to measure the distance between the impact summary and the template.

25.   (Currently Amended) An apparatus according to claim 13, wherein:

the policy enforcer includes a distance measurer to measure a distance between the impact summary and the template; and

the policy enforcer is adapted to enforce the policy if the distance is less than the threshold distance.

26.   (Previously Presented)   An apparatus according to claim 25, wherein the distance measurer includes a Hausdorff distance measurer to use a Hausdorff distance function to measure the distance between the impact summary and the template.

27.   (Canceled)

28.   (Currently Amended) A method according to claim ~~27~~1, wherein enforcing the policy includes:

measuring a distance between the template including the first and second vectors, and the impact summary including the third and fourth vectors; and

enforcing the policy if the distance is less than the threshold distance.

29.   (Canceled)

30.   (Currently Amended) A program according to claim ~~29~~7, wherein the enforcement software includes:

measurement software to measure a distance between the template including the first and second vectors, and the impact summary including the third and fourth vectors; and

enforcement software to enforce the policy if the distance is less than the threshold distance.

31.   (Canceled)

32.   (Currently Amended) An apparatus according to claim ~~31~~13, wherein:

the policy enforcer includes a distance measurer to measure a distance between the template including the first and second vectors, and the impact summary including the third and fourth vectors; and

the policy enforcer is adapted to enforce the policy if the distance is less than the threshold distance.

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PAGE 7/7 * RCVD AT 9/7/2006 2:44:31 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/14 * DNIS:2733916 * CSID: * DURATION (mm-ss):02-14

Application/Control Number: 09/654,660
Art Unit: 2143

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

After extensive searching and analysis of the best prior art in light of Applicant's claimed invention, Examiner finds that the combined Conklin '378, Luciw '281, Vaid '953 and Fries '031 references do not teach the claimed subject matter, as amended herein above. Moreover, Examiner finds that the claims, as amended require "a maximal element that exists for all concepts in the knowledge base" wherein for each concept in the directed set, there exists at least one chain connecting that concept directly to the maximal element. Additionally, Examiner agrees with Applicant, in that barring improper hindsight, motivation does not exist for combining the numerous pieces of art required to read upon each and every aspect of Applicant's claimed invention, as amended herein above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Terminal Disclaimer

The terminal disclaimer filed on 12 September 2006 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of Application Nos. 09/512,963, 09/653,713 & 09/615,726 has been reviewed and is accepted. The terminal disclaimer has been recorded. Per the recordation of the Terminal Disclaimer, Examiner finds that the Double Patenting rejection noted within the Final Office Action dated 10 February 2006, is hereby overcome and as such withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arrienne M. Lezak whose telephone number is (571)-272-3916. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571)-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/654,660
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Arrienne M. Lezak
Examiner
Art Unit 2143

AML

JEFFREY PWU
PRIMARY EXAMINER